

Amendment to the Claims

1-12. (Cancelled)

13. (Currently Amended) A plasma processing method comprising:

supplying electric power to one of a first and second electrode;

making the other of the first and second electrode have a ground potential, or making the other of the first and second electrode have a floating potential while supplying gas to a plasma source arranged in the vicinity of an object to be processed at a pressure in the vicinity of atmospheric pressure; and

processing a part of the object to be processed with a plasma, while supplying electric power to at least one of the first electrode and the second electrode, wherein ~~a length in any direction of an area of a~~ defined by an entire surface of the potentially controlled first or second electrode, which is arranged in a position opposite to the plasma source via the object to be processed, is smaller than an area defined by the perimeter of a surface of the plasma source superposed on the object to be processed, and a length in any direction of the area of the entire surface of the potentially controlled first or second electrode, which is arranged in the position opposite to the plasma source via the object to be processed, is smaller than a length in any direction of the area defined by the perimeter of the surface of the plasma source that is superposed on the object to be processed such that the area of the potentially controlled first or second electrode that opposes the plasma source is smaller than the area defined by the perimeter of the surface of the plasma source that is superposed on the object.

14. (Currently Amended) The plasma processing method as claimed in claim 13, wherein the second electrode is constructed of a plurality of electrodes, and the object to be processed is processed with a plasma in a configuration ~~to be processed~~ by selectively potentially controlling the plurality of electrodes.

15. (Previously Presented) The plasma processing method as claimed in claim 13, wherein the second electrode is constructed of a plurality of microelectrodes, and the object to be processed is processed with a plasma in a desired configuration by selectively potentially controlling the microelectrodes.

16. (Currently Amended) The plasma processing method as claimed in claim 13, wherein the second electrode is constructed by arranging a plurality of ~~potentially controlled electrodes~~ microelectrodes, and the object to be processed is processed with a plasma into configuration ~~to be processed~~ by selectively bringing arbitrary microelectrodes close to the object to be processed.

17. (Currently Amended) The plasma processing method as claimed in claim 13, wherein the object to be processed has a substrate or a thin film of a volume resistivity of not smaller than ~~10^{-6} ($\Omega\text{-cm}$)~~ 10^{-6} ($\Omega\text{-cm}$).

18. (Currently Amended) The plasma processing method as claimed in claim 13, wherein the object to be processed has a substrate or a thin film of a volume resistivity of not smaller than ~~10^{-8}~~ $(\Omega\text{-cm})$ 10^{-8} $(\Omega\text{-cm})$.

19. (Previously Presented) The plasma processing method as claimed in claim 13, wherein positions of the plasma source and the potentially controlled second electrode are displaced relative to the object to be processed.

20. (Previously Presented) The plasma processing method as claimed in claim 13, wherein the gas includes at least any one of inert gases of He, Ar, Ne, and Xe.

21. (Currently Amended) The plasma processing method as claimed in claim 13, wherein the gas includes a gas of C_xF_y (x and y are natural numbers) such as SF_6 , and CF_4 , N_3NF_3 , O_2 , Cl_2 , or a halogen containing gas of HBr or the like as reactive etching gas.

22. (Currently Amended) A plasma processing method comprising:
providing an object to be processed between a plasma source and a second electrode,
wherein the plasma source includes a first electrode and the second electrode is potentially controlled in a position opposite to the plasma source; and

supplying a high-frequency electric power to the first electrode while supplying gas from a gas supply unit to the object to be processed at a pressure in the vicinity of atmospheric pressure to generate plasma on a part of the object to be processed,

wherein the longest dimension of the area defined by ~~of~~ the surface of the potentially controlled second electrode that is superposed on the object to be processed is smaller ~~in any direction than~~ the shortest dimension of an area defined by ~~of the~~ the perimeter of the opposing side of the object.

23. (Previously Presented) The plasma processing method as claimed in claim 22, wherein the potentially controlled second electrode comprises a plurality of electrodes, and the object to be processed is processed by selectively potentially controlling the plurality of electrodes.

24. (Previously Presented) The plasma processing method as claimed in claim 22, wherein the second electrode comprises a plurality of microelectrodes, and the object to be processed is processed by potentially controlling selected ones of the microelectrodes.

25. (Previously Presented) The plasma processing method as claimed in claim 22, wherein the second electrode comprises a plurality of potentially controlled electrodes, and the object to be processed is processed by selectively bringing arbitrary ones of the potentially controlled electrodes close to the object to be processed.

26. (Currently Amended) The plasma processing method as claimed in claim 22, wherein the object to be processed has a substrate or a thin film of a volume resistivity of not smaller than ~~10⁻⁶~~ ~~(Ω-cm)~~ 10⁻⁶ (Ω-cm).

27. (Currently Amended) The plasma processing method as claimed in claim 22, wherein the object to be processed has a substrate or a thin film of a volume resistivity of not smaller than ~~10⁻⁸~~ ~~(Ω-cm)~~ 10⁻⁸ (Ω-cm).

28. (Previously Presented) The plasma processing method as claimed in claim 22, wherein positions of the plasma source and the potentially controlled second electrode can be displaced relative to the object to be processed.

29. (Previously Presented) The plasma processing method as claimed in claim 22, wherein the gas includes at least any one of inert gases of He, Ar, Ne, and Xe.

30. (Currently Amended) The plasma processing method as claimed in claim 22, wherein the gas includes a gas of C_xF_y (x and y are natural numbers) such as SF₆, and CF₄, ~~N₃NF₃~~, O₂, Cl₂, or a halogen containing gas of HBr or the like as reactive etching gas.